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STUDENT

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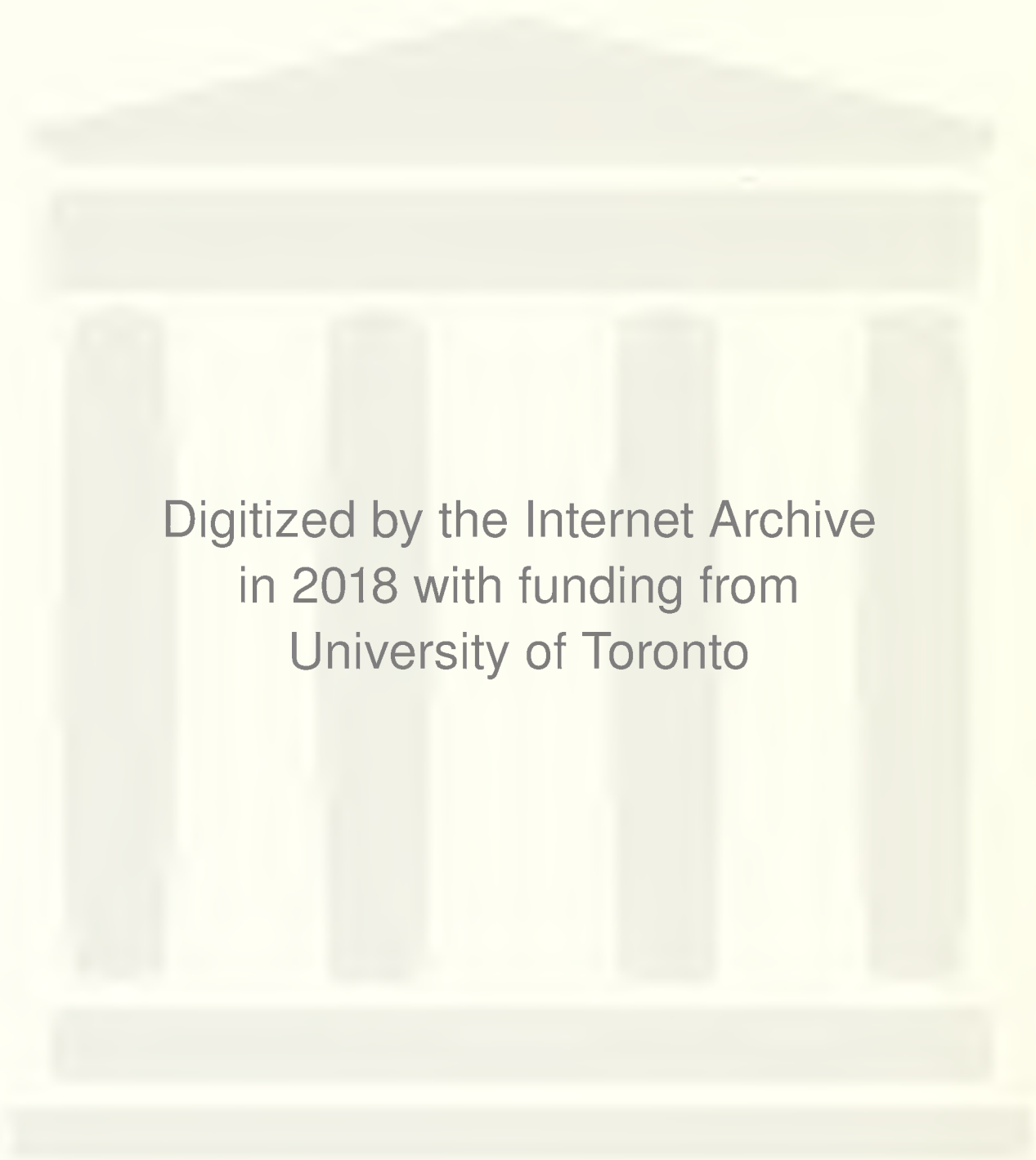
University of Toronto
Computer Centre
11 King's College Road
TORONTO Ontario
M5S 1A1

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Janet Campbell, Editor

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THE SANDFORD FLEMING TERMINAL

This month's cover photo was taken in the Sandford Fleming Terminal. This terminal has a number of Input/Output devices available, most of which are operated in self-service mode by our customers. These devices include the Gould plotter, two 1403 printers and two 2501 card readers (one of which has mark sense capabilities).

The Sandford Fleming Terminal serves as a focal point for several other services including the printing of confidential output and output scheduled for special delivery. Another special feature of the terminal is special forms printing (most of which is done at this location).

The terminal is also the main location for non prime time service. The Sandford Fleming Terminal is open from 00:00 hours on Mondays to 24:00 hours on Fridays and on Saturday and Sundays from 10:00 to 16:00. One of our operators, Isabel Dunlop, Jim Peacock, Janet Latimer (and for the duration of the summer student helper Mike Campbell) will always be on duty between 8:00 and 22:00.

If you have any questions about the terminal, we hope you'll talk to any of the operators or to Mark Tapia, Advising Supervisor for the terminal. Mark can be located in the Advising Office, Room 207 in the Engineering Annex.

Don Gibson

THE SANDFORD FLEMING TERMINAL IN
ENGINEERING ANNEX

This summer, the Sandford Fleming Terminal will be moved to the ground floor, east wing, of the Engineering Annex Building. The west wing currently houses the EUT terminal which was moved there shortly after the fire. This move should alleviate the crowded conditions that exist to-day in the SFT I/O Room. The move will also allow us to consolidate all of the SFT support staff and related services i.e. the Computing Coordinator, advising staff, keypunching and job preparation areas and interactive terminal areas.

The Computer Centre currently occupies approximately one half of the space on the second floor of the Engineering Annex. Future plans call for the remaining space on the second floor to be used for Computer Centre offices. The additional space will provide welcome relief from the crowded conditions on the second floor and will allow us to repatriate our Administrative staff from the McLennan Laboratories. The second floor will continue to house the Information, Publications and Accounting Offices. However, these areas will be expanded and reorganized to improve the layout and efficiency of the offices.

Work on all these changes will commence during the summer and the major changes should be completed in time for the fall term.

Consolidation of the Sandford Fleming Terminal, related services and support staff in the Annex should greatly improve the convenience and ease of use of Computer Centre Services.

Rein Mikkor

SUMMER CLASS C SERVICE CHANGES

As was the case during the summer of 1976, some changes are being made to Class C Service for the period May 30, 1977 until September 30, 1977. The highlights of the service changes are as follows.

1. The rate at which memory is charged will be reduced from the former service factor of 0.75 times the standard memory charge to a new effective service factor of 0.375, one half of the former rate.
2. CLASS C service on weekdays may begin prior to midnight at UTCC's discretion if the normal class loads have effectively dried up by that time. Should new CLASS A/B loads develop, CLASS C service will be suspended until these loads disappear again. On weekends, again at UTCC's discretion, CLASS C jobs that were in the CLASS C queue prior to the weekend will be run during periods of idle time.
3. The operators have been allowed, under certain precisely defined circumstances, limited authority to 'break the FIFO rule' or allow queue-jumping. The circumstances are typically as follows:
 - a. The time window remaining for CLASS C service on weekday shifts is too small to run the top job on the queue. The operator may scan down the queue until he finds the first that will 'fit the window' in order to allow optimal usage of service availability.

- b. The job at the top of the queue cannot run because of non-availability of one or more peripheral devices. There are two cases here. The first case concerns a device which is down and awaiting maintenance. In this case the operator will select the next job and proceed with the queue, returning to the original top job when the device is repaired. The second case concerns non-availability of devices because they are already allocated to a CLASS B job(s). In this case the operator will determine whether the devices will be available shortly. If so, he will wait so the top job may run. If not, he will scan down the queue looking for the first job that can run without the device(s) and release it, provided that the time estimation of this job is of the same order of magnitude of the job(s) that is being held because of device non-availability. Again, he will return to the top of the queue as soon as the devices become available and will proceed under FIFO rules as normal.

All these rule modifications have been made to allow maximum usage of the CLASS C Service time available. Except for the changes listed in this article, existing CLASS C rules and unique CLASS C credit request restrictions still apply. Users are referred to USERBOOK module 3.3BATCH and USERBOOK chapter 3.2 for further information on CLASS C. Users should note specifically that the CLASS C maximum memory allocation will remain at 250K for this summer as documented in USERBOOK.

cont'd...

SUMMER CLASS C

Further information will appear in a temporary update to USERBOOK reflecting the summer service changes for CLASS C and on signs posted at terminal locations. For further information, please contact a Computing Co-ordinator. The August COMPUTERNEWS will contain details on the precise mechanics and timing of the return to normal CLASS C Service.

Derry Cox

HOURS OF SERVICE - JULY 1st WEEKEND

The following hours of service will be in effect for the July 1st weekend:

	<u>July 1</u>	<u>July 2</u>	<u>July 3</u>
	(Friday)	(Saturday)	(Sunday)

S/370-165-II closed 10:00-18:00 10:00-18:00

S/360-65 unattended 9:00-18:00 9:00-18:00

Normal hours of service will resume on Monday, July 4, 1977.

OFF THE TOP

The OFF THE TOP column made its debut in last month's issue of COMPUTERNEWS. As fate would have it, there were errors in two of the three articles appearing in the column. First, the samples in the article on high quality printing were poorly reproduced. This problem was caused by the contrasting ink density in the printer samples versus that in the body of the newsletter.

The photo-offset process used in printing our newsletter could not adequately accomodate the different tones and the contrast resulted in poor samples. If you are interested in examining the original printer samples, they are available in the Information Office, Engineering Annex room 206.

Secondly, we just plain goofed in the second article on the new type of special form. In diagram D, the second row of holes was shown erroneously; the holes in diagram D should be identical to those in diagram B. Our apologies for any confusion these errors may have caused.

Conservation and Recycling at UTCC

Recently, Pollution Probe again urged the University of Toronto to clean up its' act and become a "conserver campus". Over a period of years, UTCC has been concerned about the problem of paper wastage and has instituted numerous programs in an attempt to effectively recycle our used computer paper and cards. In addition, many efforts have been directed at reducing the source of computer paper and cards.

In retrospect, efforts at recycling used paper and cards have been, at best, disappointing. The major problems occur in getting all our users to co-operate in the recycling effort without having our staff involved in policing and cleaning up afterwards. As a result, UTCC has let Physical Plant handle our recycling efforts.

UTCC's programs to cut down the use of paper and cards at the source, i.e. schemes to lessen the use of paper and cards, have had more positive and encouraging results.

cont'd...

OFF THE TOP

cont'd

Some of the successful efforts have been:

- a. Use of the reverse side of printouts for 2741 and other hardcopy terminals
- b. Using 8 lines per inch on printers to allow a smaller printer page (25% saving in paper)
- c. Access control system to limit the number of HSJS runs (about 30% less HSJS jobs were run. However, each job used more CPU resources).
- d. Encouraging the use of video terminals instead of hardcopy terminals.
- e. An indirect result of price increases for input/output charges for reading cards and printing lines has resulted in a slower growth rate in paper and card consumption.
- f. Use of microfiche from IBM instead of manuals.
- g. Online documentation for low speed terminal users (i.e. HELP command in TSO)

However, we still have a long way to go. In the next few years, UTCC hopes to further eliminate the need for cards and paper by encouraging more computing using RJE with low speed terminals and by encouraging more interactive computing. An example of this effort is the evaluation of an interactive SPSS and the evaluation of a new time-sharing service (see TIME-SHARING SYSTEMS EVALUATION below).

Your suggestions about other techniques to lower paper and card usage are welcome. Contact your Computing Co-ordinator or give me a call at 978-7331.

Stan Yagi

The following article is reprinted from the April 1977 issue of the Ryerson Computing Centre Newsletter.

BISHOPS, KNIGHTS AND BLINKING LIGHTS:
SOME THOUGHTS ON COMPUTERIZED CHESS

In order to play the game of chess well, the player should be possessed of certain qualities - patience, logical thought processes, good memory and the ability to mentally project ahead.

Consider then the GREENBLATT CHESS PROGRAM developed by the Massachusetts Institute of Technology's Department of Artificial Intelligence. It is certainly patient. In fact, being unable to be distracted, angered, worried or psychologically impressed, it is the epitome of the dispassionate and concentrative player. As far as logic and calculating analysis are concerned, these are the computer's whole being and method of operation. Good memory is assured by the kilobytes of core storage available to the chess program, which also give it the ability to internally project the probable permutations of pieces according to the direction in which a game is progressing.

cont'd...

COMPUTERIZED CHESS

cont'd

Because the game of chess is so much a question of logic, men have long been attempting to mechanically duplicate its processes. As early as the eighteenth century, an Austrian hydraulics engineer named Baron Wolfgang Von Kempelen had supposedly constructed a chess-playing robot which he named the Turk.

The Turk was a life-sized wooden figure, turbaned and robed, which sat on top of a coffin-sized box that contained its operating mechanism. Before each exhibition, this maze of cogs and gears and wheels would be revealed to the audience by means of doors in the cabinet. The Turk, which always played white, would sit motionless, apparently staring at the board in front of it, and then suddenly amid a loud clanking and grinding, its left hand would angle over to move the desired piece.

For half a century, the Turk played and delighted audiences all over Europe and North America. Two of the machine's opponents were Frederick the Great of Russia and Napoleon Bonaparte. It played an excellent game of chess and beat some of the prominent players of the continent (although always graciously conceding games to ladies).

It was not until after the death of the Baron that the Turk was discovered for the fraud it was. Mirrors had concealed the presence of a midget master chess player whom Von Kempelen had found through the Vienna papers. The board on top of the machine had been magnetized to move metal disks on its underside. The midget duplicated these moves on a miniature chess board that he had with him, and then moved the cranks necessary in order to have the Turk's figure make the responding move.

Since then, of course, computers have managed to master the processes of chess without having to conceal little men in their inner workings. Now there are literally dozens of chess programs, many of which compete against one another. This year, CHES 4.5, an eight-year-old program played from a computer in Minnesota, defeated CHAOS, a four-year-old program residing in a computer in Sunnyvale, California, for the North American title. It will now go on to the world championships later this year against the Russian champion program.

Admittedly, many computer programs are quite sophisticated. In 1972, the year it was first completed, The Greenblatt program won a class 'D' trophy and was made an honorary member of the United States Chess Federation. Yet undeniably, human Grand Masters can still defeat any computer chess program. Perhaps it's a question of the superb processes and resources of the human mind. Some feel it is because the game of chess when at its best is a creative, artistic endeavour rather than simply a mathematical equation. Many computer scientists disagree and are laboriously striving towards the day when their chess playing computer will be the ultimate opponent.

D. Dowhal

MVS PROGRESS REPORT

Work on the planned conversion to MVS is progressing. Some of the highlights of our activities are as follows:

1. MVS Job Validation Services have been established. Users who believe that their particular program might not run correctly under MVS and who would like to have their program ran under MVS should contact a Computing Coordinator or Herb Kugel at 978-7286. Job turnaround will be about one week.
2. The analysis to determine a set of accounting algorithms and rates is on-going. Data from jobs run both under MVT and MVS is being correlated in order to minimize the variance in job cost.
3. UTCC System enhancements which support all accounting requirements through standard SMF records are being developed and tested. All on-line accounting functions are being localized as part of the Job Entry Sub-System. This approach offers flexibility and enhanced reliability. In addition, provision is being made for system extension in the area of security in order to allow the use of RACF (Resource Access Control Facility, an IBM product) or a RACF-like product.
4. Work on HSJS swapping, support TSO local commands, Calcomp and Gould is progressing.
5. The circuit boards required for the 165-II Processor Speed Up Unit have arrived and are being checked out by the Hardware Support Group.

6. On TSO, HSJS and Batch resource usage measurements are being used to build and calibrate a new benchmark stream to be used in the planned June benchmarking/tuning series.
7. IBM system enhancements to JES2, the Input/Output Supervisor, Hardware/Software Error logging and reporting and Print Dump routines are being installed.
8. Preventative maintenance to the base MVS 3.7 system using the 7701, 7702 and 7703 MVS Program Update tapes is being done.

Finally, I would like to welcome back Don Brady who will be working with us for the summer. Don's vast experience with MVS will certainly prove beneficial.

Walter Berndt

TIME-SHARING SYSTEMS EVALUATION

The evaluation of alternative time-sharing systems is now in its final stages. The Presidential Advisory Committee on Computer Facilities and Services (PACCFS) will be reviewing a comparative evaluation of the systems proposed by the different manufacturers in early June. A recommendation by PACCFS for a specific system should follow shortly thereafter.

cont'd...

TIME-SHARING SYSTEMS cont'd

The evaluation of the different systems was based on written proposals submitted by each of the manufacturers. The criteria by which the different systems were evaluated included the general requirements expressed by our user community in the time-sharing survey. In some cases where the written submission required further explanation or clarification the vendors' technical staff presented seminars on the specific aspects of the system in question.

I would like to thank both the vendors and UTCC staff for the time and effort spent in this evaluation. Their hard work will help to ensure the selection of a system which will best suit our users' needs.

Rein Mikkor

NEW TAPE DRIVES FOR S/370 SERVICES

Early in July 1977, UTCC will be implementing a new tape drive configuration on the S/370-165-II system.

The four STC nine-track drives will be replaced by four IBM model 3420 9 track tape drives, all of which will operate at either 1600 or 6250 BPI (bits per inch) densities. In addition, IBM will be installing 2 model 2401 9 track, 800 BPI drives to maintain the current availability of this track/density combination. No changes are planned for the 2 IBM 2402 7 track drives.

Users should note that this new configuration will require no JCL or setup changes. For specifying density or unit type:

<u>UNIT</u>	<u>TRACKS</u>	<u>DENSITIES</u>
IBM 3420	9	1600/6250 BPI
IBM 3420	9	1600/6250 BPI
IBM 3420	9	1600/6250 BPI
IBM 3420	9	1600/6250 BPI
IBM 2401	9	800 BPI
IBM 2401	9	800 BPI
IBM 2402	7	200/556/800 BPI
IBM 2402	7	200/556/800 BPI

When the 6250 BPI density was first introduced at UTCC, we recommended that users choose 1600 BPI as their normal "working" density for two reasons:

1. All four drives had 1600 BPI density available making it the optimum density for maximizing throughput through the tape queue.
2. The 6250 BPI density was new to the industry at that time implying that 6250 BPI tapes would not be easily transportable to other sites.

These recommendations were made in spite of the advantages that 6250 BPI offered - notably the most reliable density in terms of error detection/diagnosis/recovery and the most efficiency in terms of tape consumption.

Now that UTCC will have 4 drives available with 6250 BPI capability, users should feel free to use that density for normal work. When tapes are likely to be moved to other centres, however, users should plan accordingly before choosing the density. The following table shows the densities of the units at other UTCC sites:

cont'd...

NEW TAPE DRIVES

cont'd

<u>SITE</u>	<u>DENSITY</u>
S/360-65	800
S/370-155	1600
	(1600/6250 after August 1977)
<u>CRF</u>	
GT40	800
GT44	800/1600

Users who move tapes to other computer centres or who use laboratory equipment tape drives have to determine the appropriate track/density requirements for their needs.

USERBOOK module 3.3TAPES contains further information on the facilities for tape use at UTCC. The following chart is reprinted from this module.

For 7-track tapes code:

UNIT=2400-2,DCB=(DEN=0) for 200 BPI drives
UNIT=2400-2,DCB=(DEN=1) for 556 BPI drives
UNIT=2400-2,DCB=(DEN=2) for 800 BPI drives

For 9-track tapes, code:

UNIT=2400,DCB=(DEN=2) for 800 BPI drives
UNIT=3400-3,DCB=(DEN=3) for 1600 BPI drives
UNIT=3400-5,DCB=(DEN=4) for 6250 BPI drives

Paul Scarborough/Derry Cox

UTCC NON-CREDIT SHORT COURSES

The following short courses will be offered during June 1977. Please note that only persons holding a valid UTCC Customer Account Number (CAN) are eligible for these courses. Those interested in registering for either course can do so by contacting Marg Doherty in Room 206 of the Engineering Annex, 978-8995.

STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES (SPSS)

Prerequisite: Background in Social Science Statistics

Dates: June 13, 15, 16, 20, 22 & 23

Time: 3:00 p.m. to 4:30 p.m.

For Social Sciences users who are, or will be, using the computer to process their data. SPSS is an applications-oriented programming language which contains powerful routines for the analysis of data while allowing users to manipulate their data with simple FORTRAN-like statements.

INTRODUCTION TO JOB CONTROL LANGUAGE (JCL)

Prerequisite: Some previous exposure to computing or the ability to verbally define his/her particular requirements of the services available on the S/370-165-II.

Dates: June 27, 28, 29 and 30

Time: 3:30 p.m. to 5:00 p.m.

JCL is a set of control statements which must be supplied to the operating system to give it the information required to initiate, process and complete a job or unit of work. These statements communicate details such as who the user is, what he/she wants done, how much time it will take, how much space is required, what devices will be involved, what data and problem-solving routines are to be used, where they are located and where the results are to be printed or stored. This course is intended to get the student started by presenting the basic JCL statements, their uses and coding rules.

Marg Doherty

NEW EQUIPMENT FOR SCARBOROUGH AND ERINDALE

The arrival of new computer equipment is usually relegated to the most inappropriate and inconvenient of times, thereby generating very little enthusiasm. However, the new Remote Job Entry systems arriving at Scarborough in July and at Erindale in August will deviate from the norm and attract wide-spread attention.

The modular design of both RJE systems will certainly cause the users of the old REMCOM system great excitement. The adrenelin will flow most rapidly when they see two DOCUMENTATION card readers and two TELETYPE 40 printers driven by a DEC PDP 11/10 processor. The users at Scarborough will no longer have an online punch to complement their system but the punch at Erindale will remain. Scarborough is replacing the Univac VIP punch with a TAB keypunch for interpreting. Although the RJE systems will not offer greater reading or printing speeds, they will provide greater reliability, convenience, serviceability and flexibility for future computing needs.

The exact dates for the official dedication of the new systems have not yet been confirmed but they will be announced in a later issue of COMPUTERNEWS. Dr. J. Amdahl, assistant professor at Erindale and Scarborough will be present at the dedication to give a short dissertation on "How I Learned to Love Computers". Computing Co-ordinators Martin Hubel from Scarborough and Clem DiPlacido from Erindale, will also be on hand to answer any questions related to the new RJE systems.

Clem DiPlacido and Martin Hubel

INTERACTIVE TERMINALS AT AST

Four interactive terminals have been installed for general use at the Arts and Science Terminal located in Room 2105 in the Sydney Smith Building. One terminal is hardwired to the S/370-165-II, providing TSO access only. The other three are dial-ups, allowing users to log on to APL, ATS, TSO or WYLBUR.

Jill Reece

WYLBUR WORDS

Sample Sessions

This column features WYLBUR "sample sessions" in order to give users an idea of how WYLBUR can be used for various applications. The session on the following pages shows a WYLBUR user (in this case a programmer) allocating a LIB dataset, registering it, creating a FORTRAN program, saving it, collecting the output, routing the job to the self-service printers, checking the LIB registration and signing off from the system.

Note that in the explanation of the sample session which follows, user input is shown in lower case, while computer output is in upper case. The first few lines show the sign on sequence. The user then enters 'set terse' in response to the 'COMMAND?' prompt. This changes the prompt to '?'.
 COMMAND? set terse
 ?

cont'd...

WYLBUR WORDS

cont'd

To allocate and register a LIB dataset, the user executes two public exec files, 'liballo' and 'reg'. The first is temporarily suspended due to a bad job card (the exec files generally assume that WYLBUR will build a job card automatically, but this part of WYLBUR has not yet been modified for the UTCC job card format). The user types in a new job card and issues the RUN command. The 'reg' exec file does build a job card, since it prompts for the System/370 Access Code password.

The user then enters, submits and saves a sample FORTRAN program and collects the output. The '****' after the 'clear active' indicates that the user hit ATTN (or BREAK) to start COLLECT (or INPUT) prompting. Any typing errors were backspaced over to correct them. The '****' for line 8 signals hitting ATTN to get out of COLLECT mode. The 'l' (or 'list') command causes the file to be printed back for verification, before it is 'run' (submitted to batch) at the start of the second page. The 'save' command stores the file in the LIB dataset (by default, i.e., it is the same as save lib#samprje or save lib(samprje)).

The 'locate' or 'loc' command finds the status of the job, by OS job name then by HASP job number and 'fetch' recovers the output (by default the first file - the system log) into the active file. The 'p unnum' asks for a printout ('p' and 'l' are slightly different forms of the same command - 'p' updates the current line pointer, 'l' does not). The three dots (...) indicate that our sample user hit ATTN to interrupt the listing, not wanting to see all the accounting details. To get the relevant information, the user enters

meaning 'print all lines containing 'was exec' without line numbers'. Seeing that both job steps ran, the user enters 'locate...long' to get file names, then fetches the desired file (ddn 6), prints it and routes the output to self service (dest gg). Finally the user checks the 'register' output and seeing that it ran ok, purges the output and signs off.

Future WYLBUR WORDS articles will deal with text formatting, data collection, etc. as well as any topics suggested by users. All sessions appearing in this column will be incorporated into WYLBUR documentation.

For further information on the commands which were discussed above, refer to the WYLBUR Reference Manual. Users with comments, suggestions or inquiries are invited to contact Ian Darwin at 978-7318 or 49 St. George, Room 303.

Ian Darwin

```

UTCC LINE 5 13:23:23 05/15/78

WELCOME TO WYLBUR UP TIL 22:00

USERID? W01234
PASSWORD *****
COMMAND? set terse
? exec fro $wyl.lib#liballo on cat
TYPE A '?' IN ANSWER TO A PROMPT IF YOU WANT MORE INFO
PDS name? lib
Volume? USER10
ALLOCATION? 10,0,10
DCB Parms?
RUN?
BAD JOB CARD, LINE 1001
? 1001 //w0123456 job (,1234,abcd),j.smith
? run 1001/1
? exec from wyl.lib#reg on cat clr
--- THIS EXECFILE REGISTERS A DATASET
ENTER SAVE FOR ACTIVE OR (CR) TO CLEAR
ENTER FULL DSNNAME u01234.lib
-- ACCESS CODE IS 1234
ENTER PASSWORD abcd
VOLUME ON WHICH DATASET RESIDES? (DON'T SPECIFY CAT HERE) user10
--- REGISTER JOB W01234RR SUBMITTED, CHECK ITS OUTPUT.
? clear act
? ***
1. ? //w0123401 job (ty,1234,xxxx),'j.smith'
2. ? // exec fortgo
3. ? //sysin dd *
4. ? write(6,6)
5. ? 6 format(' Hi, I am a computer?')
6. ? stop
7. ? end
8. ? ***
? 1
1. //W0123401 JOB (TY,1234,XXXX),'J. SMITH'
2. // EXEC FORTGO
3. //SYSIN DD *
4. WRITE(6,6)
5. 6 FORMAT(' HI, I AM A COMPUTER')
6. STOP
7. END

```

```

? run
? sav #samprje
MEMBER SAMPRJE SAVED IN U01234.LIB
? loc w0123401
JOB 324 W0123401 AWAITING EXEC A Prio 6
? loc 324
JOB 324 W0123401 AWAITING EXEC A Prio 6
? loc 324
JOB 324 W0123401 AWAITING PRINT 96 Prio 6
fetch 324
OK TO CLEAR? ok
? p unnum

H A S P   S Y S T E M   L O G
- INIT 4 - CLASS A
WAS EXECUTED - COND CODE 0000

$ 12.52.13 JOB 324 -- W0148001 -- BEGINNING EXEC
*12.52.19 JOB 324 XEQ142I STEP FORT
*12.52.19 JOB 324 XE...
p 'was exec' unnum
*12.52.19 JOB 324 XEQ142I STEP FORT
*12.52.25 JOB 324 XEQ142I STEP GO
? loc 324 long
JOB 324 W0123401 AWAITING PRINT 96 Prio 6
J. SMITH
1 SYSLOG
2 (NULL)
3 IEFPSI
4 SYSPRINT
5 SYSLOUT
6 FT06F001
? fetch 324 ddn 6
OK TO CLEAR? ok
? p unnum
HI, I AM A COMPUTER
? route 324 des 99
? fetch w01234rr ddn 4 clear
? p unnum squash
SYSTEM /370 SUPPORT UTILITY - CONVERT VERSION OF 77APR15 AT 03.22.43
*** DATASET "U01234.LIB" HAS BEEN CATALOGUED IN THE USER CATALOGUE ***
*** RECORD FOR DATASET "U01234.LIB" HAS BEEN ADDED TO LOGFILE ***
? purge w01234rr
? signoff
OK TO CLEAR? ok
0.47 SECONDS EDITING TIME
21 PAGE READS, 45 PAGE WRITES
9 DISK READS, 1 DISK WRITES
ELAPSED TIME = 00.14.29
SESSION COST = $ 0.57

```

SOME WYLBUR PROBLEMS

Users with CRT terminals may encounter difficulties using WYLBUR since the current system does not have a means to specify screen size. A future version will probably incorporate these as SET and SHOW SCROLL or SCREEN. The following may be of assistance in the interim.

For lines over the width of the terminal:

```
?set length 66
?show size over length
  (lists back line numbers)
?align (numbers separated by
  blanks) even
?p all
```

For documents longer than one screen:

```
a.) ?set mode edit retry
?p *+1(22)
  (22 = screen depth minus two)
  repeatedly hitting (CR) twice
  will scroll through the file a
  page at a time.
```

```
b.) ?collect 24.1 by 24 merge
    24.1? type a '1'
    48.1? 1
    72.1? 1
        etc.
?p marker 1
```

will stop for a (CR) at the end of each page

Ian Darwin

QED NEWS

A new version of the QED text editor will be made available to users on June 1, 1977.

The new version can be accessed by prefixing any current QED command (except xqed) with 'new', (i.e. newqed, newtqed, newrqed, etc.). Help can be obtained by using the new command names. For example, enter

help newqed, etc.

On June 20, 1977 the current version of QED will be deleted at which time the command names described above (newqed, etc.) will drop the prefix 'new'.

Summary of Changes

1. Several bugs have been removed:

- input lines may be any length
- 'ona' now means 'ou' rather than 'oa'
- 'ons' now means 'ov' rather than 'os'

2. Changes in function:

- system commands are no longer converted to upper case, for example,


```
send 'hello'
sends hello rather than HELLO
```
- the defaults for three options have been changed;


```
NOPROMPT to PROMPT,
NOECHO to ECHO,
COMPATIBLE to INCOMPATIBLE
(INCOMPATIBLE means that com-
mands on the same line must
be separated by spaces).
```
- for creating new datasets, the qualifier PLI now means


```
RECFM=VB,LRECL=104,BLKSIZE=4096
```
- the default blocksize for creating new COBOL or FORT datasets is now 800 rather than 400

cont'd...

QED NEWS

cont'd

3. New features:

- '?' can be used to retrieve second level messages issued by previous system commands
- the following two new default dataset qualifiers have been added:

PLIF	RECFM=FB,LRECL=80,BLKSIZE=800
OBJ	RECFM=FB,LRECL=80,BLKSIZE=800

Jim HelfetzSPEAKEASY SESSIONS

The MU version of SPEAKEASY has been in use for some time and no new problems have been encountered. The SPEAKEASY Centre has announced that this version will be fairly stable through to the end of 1978.

The current USERBOOK module 3.3SPEAKEASY will be replaced shortly with a more concise introductory module containing "sample sessions" of various applications. Modules 3.3SPEAKEASY.INTER and 3.3SPEAKEASY.LINKULES will be deleted, as they are now incorporated in the new Reference Manual. The Reference Manual will be available on tape for printing or, if there is sufficient demand, copies will be stocked for sale in the Information Office. Similarly, the HELP file will either be on tape or for sale.

Users with problems, suggestions or comments are invited to contact Ian Darwin at 978-7318, 49 St. George, Room 303.

Ian Darwin

P.S. ... P.S. ... P.S. ... P.S.
ADDRESS LABEL PACKAGE AVAILABLE

Do you need address labels?

Have you been using the LABEL utility program? Are you tired of shuffling through boxes of cards every time you want to add, change or remove a name or address? Do you really need labels for only part of your file but print all of them because it's too much trouble to take out the cards you don't want, run the job and put the cards back? If so, Programming Services may have the answer to your problem.

Programming Services has written a package which will build a file on tape of name and address information. Using the package, records can be easily added to, revised and deleted from the file. In addition, labels can be printed for all, or a selected part, of the file by sorting according to certain fields.

Because this is a general address label package our charge for producing your labels will be modest. If you need labels, call Programming Services at 978-6021.

Sally Holton

ARE YOU CONCERNED WITH YOUR OFFICE EFFICIENCY?

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Eliminate the Necessity of Retyping Entire Documents that Require Revision or Updating



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Increase Office Productivity

**ATS is easy and quick to learn
INTERESTED?**

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UTCC'S CUSTOMER SERVICE GROUP AT**

978-6021

GPJS - SOFTWARE USAGE STATISTICS

The following chart summarizes the software usage per classified procedure and program name for the General Purpose Job Stream from April 1, 1977 to May 3, 1977.

SOFTWARE	USES	
	(#JOBSTEPS)	(%)
ALGOL	96	0
APLSV	20	0
ASM	427	1
BMD/BMDP	687	2
COBOL	213	1
CSMP	126	0
DATATEXT	91	0
DEBUGUTIL	2	0
DISKUTIL	2,295	7
DSUTIL	4,564	14
DYNAMO	678	2
FORMAC	21	0
FORTTRAN	9,715	29
GPSS	655	2
GRAPHICS	2,163	6
JCLUTIL	143	0
LISP	61	0
MARKEXAM	67	0
MARKIV	631	2
MPS/MPSX	668	2
OSUTIL	268	1
PAPERTAP	76	0
PL/I	2,866	9
RPG	57	0
SAS	75	0
SERVAID	185	1
SNOBOL	1,217	4
SORTMERG	1,363	4
SPEAKEZ	46	0
SPSS	3,026	9
TAPEUTIL	410	1
TIPRS	83	0
TSO	56	0
WYLBUR	106	0
XFR	323	1
TOTAL	33,480	

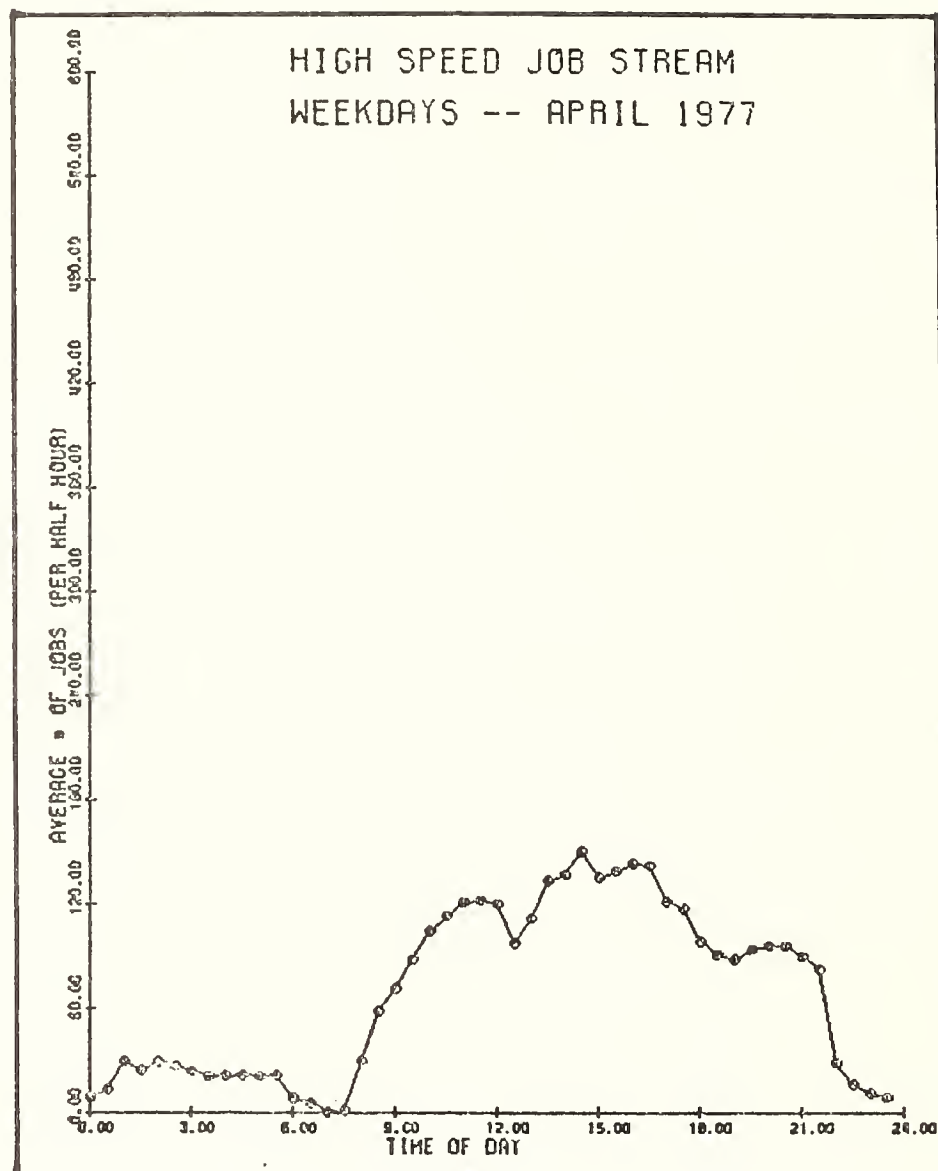
Kin Fong

HSJS MONTHLY STATISTICS

During the month of April 1977, 81,207 jobs were processed compared with 122,510 for the previous year, a decrease of 33.7%.

The following charts summarize the HSJS activity for the month of April. The graph represents the average number of jobs processed during each half hour period of the day.

Mark Tapia



RESOURCE USAGE BY PROCESSOR			TOTAL PER PROCESSOR			AVERAGE PER USE		
PROCESSOR	#USES	%TOTAL	CPU (MIN)	#CARDS READ	#LINES PRINTED	CPU (MIN)	#CARDS READ	#LINES PRINTED
WATFIV	38185	(47)	599.44	6534366	7552424	0.016	171	197
PL/C	21718	(26)	492.38	5282113	8806302	0.023	243	405
SPITBOL	5090	(6)	61.19	1233155	1679220	0.012	242	329
ASMG	4768	(5)	163.56	2004182	3177307	0.034	420	666
SP/K	2555	(3)	34.31	185200	379214	0.013	72	148
SNAP	2291	(2)	42.13	150190	675246	0.018	65	294
UTILITY	2193	(2)	6.81	469067	564879	0.003	213	257
SPSSQ	1934	(2)	45.44	150177	305458	0.023	77	157
ALGOL W	1396	(1)	26.25	641666	520511	0.019	459	372
WATBOL	471	(0)	7.94	94328	121738	0.017	200	258
PLC7.5	216	(0)	5.94	80855	147691	0.027	374	683
LISP	189	(0)	3.56	51131	70199	0.019	270	371
WAT5-S	93	(0)	0.63	6194	9181	0.007	66	98
\$ TEST	69	(0)	0.06	7334	7982	0.001	106	115
SPSS Q	28	(0)	0.50	10558	3374	0.018	377	120
SIMON	4	(0)	0.00	81	210	0.000	20	52
PLUTO	3	(0)	0.00	149	188	0.000	49	62
ASSIST	3	(0)	0.00	32	71	0.000	10	23
SP/K M	1	(0)	0.00	3	12	0.000	3	12
TOTAL	81207		1490.75	16900781	24021207	0.018	208	295

S/370-165-II RELIABILITY

The reliability statistics for April indicate an uptime percentage of 93.8 while the average number of unscheduled IPL's per day reached 1.31. The number of scheduled hours of production for April totalled 452.

MONTHLY COMPARATIVE FIGURES

MONTH	% UPTIME	UNSCHED. IPLs/DAY
Jan/76	99.1	1.43
Feb/76	98.9	0.97
Mar/76	96.8	1.03
Apr/76	99.3	0.52
May/76	98.8	0.67
Jun/76	96.5	0.97
Jul/76	96.4	0.72
Aug/76	99.4	0.47
Sep/76	98.4	0.86
Oct/76	96.9	0.83
Nov/76	98.2	1.10
<u>Dec/76</u>	<u>99.3</u>	<u>0.48</u>
<u>1976</u>	<u>98.2</u>	<u>0.75</u>
Jan/77	99.2	0.76
Feb/77	97.7	0.60
Mar/77	97.9	0.94
Apr/77	93.8	1.31

The percentage breakdown for April was:

HARDWARE: 1564 minutes (92.5%)
 SOFTWARE: 212 minutes (7.2%)
 OTHER : 5 minutes (0.3%)

The major events contributing to these downtime totals were as follows:

April 1 - 184 minutes down - 2 reloads

- 7 minutes charged to a HASP CATASTROPHIC error.
- 177 minutes resulted from EQUIPMENT checks on the ITEL controller attached to CHANNEL 4. Corrective maintenance replaced a bad card in the unit.

April 4 - 68 minutes down - 5 reloads

- 15 minutes due to three supervisor loops.
- 35 minutes attributed to IBM installing engineering changes on the MULTIPLEXOR channel (2870).
- 18 minutes resulted from two HASP CATASTROPHIC errors.

April 6 - 23 minutes down - 2 reloads

- 7 minutes caused by an equipment check on channel-3/Drive C which forced hardcopy to the console.
- 16 minutes due to an A05 wait caused by SCU checks in ITEL memory.

April 13 - 47 minutes down - 3 reloads

- 12 minutes lost when all HASP XEQ was being routed to the SYSOUT=H queue.
- 35 minutes resulted from SCU checks in ITEL memory. A bad card was replaced.

April 18 - 34 minutes down - 3 reloads

All time charged to "ENTER ERRORS" on the 2870 MULTIPLEXOR CHANNEL. A definite solution was not found by IBM for the transient problems.

April 21/22 - 650 minutes down - 5 reloads

All time charged to SCU checks in ITEL memory over a period of two days. Errors were isolated to the third/fourth megabytes. Corrective maintenance repaired two TRI-LEADS which were connected improperly.

cont'd...

DOWNTIME REPORT ON S/370 FOR APR 77

DAY	REIPL	DYTIME	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
F	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184
S	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	21	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	26	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(CENTER CLOSED)

LEGEND : ONE □ =ONE UNSCHED. IPL
 ONE * =ONE MINUTE OF DOWNTIME

TOTAL SCHEDULED HOURS OF PRODUCTION : 452
 TOTAL DOWNTIME (MN) : 1690 , AVG/DAY : 58.28 , AVG/PROD HOUR : 1.81
 TOTAL UNSCHED. IPL'S : 38 , AVG/DAY : 1.31
 DOWNTIME RATE IS : 6.23 PERCENT OF SCHEDULED PRODUCTION HOURS

S/370-165-II

cont'd

April 25 - 349 minutes - 4 reloads

All time charged to SCU checks in ITEL memory causing supervisors loops. Corrective maintenance replaced a bad card.

April 28 - 263 minutes down - 1 reload

All time charged to SCU checks in ITEL memory. Corrective maintenance replaced an external storage control card and TRI-LEAD.

April 4: 1 IPL - 47 minutes downtime as ATS ROLLIN overlapped into normal production hours.

April 9: 1 IPL and 143 minutes downtime. IBM was notified when all attempts to IPL failed as a result of storage checks in Low Core Storage area. While the Field Manager was trying to locate personnel trained on LCS, memory size was reduced in order to start APL in high speed memory without the SHARP file subsystem. Later in the evening after several hours of corrective maintenance, the Customer Engineer replaced a bad write driver card at location 01B-B1E4 in Low Core Storage.

April 25: APL abended on numerous occasions from data checks on workspace library disk. The problem was finally corrected by running workspace dump/restore and switching to alternate APL system packs.

INTERACTIVE SYSTEMS RELIABILITY

The uptimes achieved for the month of April for each of APL and ATS were 98% and 99.12% of scheduled operation, respectively. The number of scheduled hours of operation for this month totalled 460, while the number of unscheduled IPL's per day was 0.07. In addition to the regular hours, Interactive Services were also available for approximately 120 hours of unattended weekend operation.

The percentage breakdown of total system downtime for April was: Hardware - 158 minutes (72.81%), Operational and environmental - 59 minutes (27.19%). Two unscheduled IPL's were required as a result of the failures. The major events contributing to downtime were as follows:

The following table summarizes the time lost out of scheduled hours of production due to system failures for each of the systems.

Kam Jain

INTERACTIVE SYSTEMS

cont'd

DATE	DOWNTIME (MIN)		REASON
	APL	ATS	
Mon. April 4	47	47	Late IPL ROLLIN overlapped into normal production hours
Tue. April 5	6	6	CDC preventive maintenance extended into production hours
Sat. April 9	271	166	*Storage checks in LCS (Hardware)
Thu. April 14	-	4	ATS shutdown in order to allow CE to replace glass disk cover
Mon. April 18	6	6	Late IPL-ROLLIN overlapped into normal production hours
Fri. April 22	15	15	*CPU entered solid system state (Hardware)
Sat. April 23	7	-	Data checks on 2314 disk drive (Hardware)
Mon. April 25	194	-	Data checks on 2314 disk drive (Hardware)
Wed. April 27	6	-	APL shutdown in order to retrieve user workspace
TOTAL	552	244	*IPL Required
System failures April 1 - April 30, 1977			

UTCC COMPUTER EQUIPMENTSYSTEM/370 MODEL 165-II

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream, APL SV and TSO services
- 4 megabytes of memory
- 1 drum (2301)
- 18 disk drives (3330)
- 9 disk drives (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 8 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 1536K bytes of core
- 26 disk drives (2314)
- 3 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL and ATS

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 System with
 - 1 PDP-11/40 CPU
 - 2 RK05 disk drives
 - 2 9-track dual density tape drives
 - 1 1000 cpm card reader
 - 1 300 lpm line printer
 - 1 220 lpm lower case line printer
 - 1 paper tape reader/punch
 - VT11 graphics display unit
 - Lab. peripheral system with A/D and D/A
 - 1 Digitizing Tablet (20" by 20")
 - 1 ZETA incremental plotter (11")
 - 1 CVI 260 Video Bandwidth Compressor
 - 1 CVI 261 Video Bandwidth Expander
- DEC GT40 System with
 - 1 PDP-11/05 CPU
 - 3 DIABLO disk drives (RK05 type)
 - 1 9-track/800 BPI tape drive
 - VT11 graphics display unit
 - 1 Digitizing Tablet (20" by 20")
 - Card reader and line printers shared with GT44

UTCC DIRECTORYACTING DIRECTOR

Rein Mikkor	NP351	5058
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INFORMATION OFFICE

General Inquiries	EA206	4990
Marg Doherty	EA206	8995

MANAGER, SERVICES

Stan Yagi	SG200	7331
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INFORMATION SERVICES

Don Gibson	EA206	5568
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SUPERVISOR, CUSTOMER SERVICES

Bill Foster	SG301	6021
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SUPERVISOR, PROGRAMMING SERVICES

Helen Peacock	SG201	6877
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COMPUTING CO-ORDINATORS

Sandford Fleming Terminal		
Mark Tapia	EA207	7109
Program Advisors	EA207	8599
Erindale		
Clem DiPlacido		828-5311
Scarborough		
Martin Hubel		284-3173
Arts and Science		
Jill Reece	SS2104	6509
New Physics		
Bob Chambers	NP1201	8823

MANAGER, OPERATIONS

Derry Cox	EA206	7092
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SUPERVISORS, OPERATIONS

Paul Scarborough (S/370-165-II)	SF105	6220
Kam Jain (S/360-65)	NP333	7374
Dave Wong (S/370-155)		6864

MANAGER, SYSTEMS

Rein Mikkor	NP351	5058
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SYSTEM HARDWARE SUPERVISOR

Eugene Siciunas	EA206	4967
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MANAGER, COMPUTER RESEARCH FACILITY

Dennis Smith	SF207	4086
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LAB CO-ORDINATOR (CRF)

Krishna Patnaik	SF207	4086
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ACCOUNTS

Ann DeFazio	EA206	7148
Yvonne Bowen	EA206	8702

ACCESS CODES

Gail Cavers	EA206	8703
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MANAGER, INFORMATION SYSTEMS

Sean Keeley		3579
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NOTE:

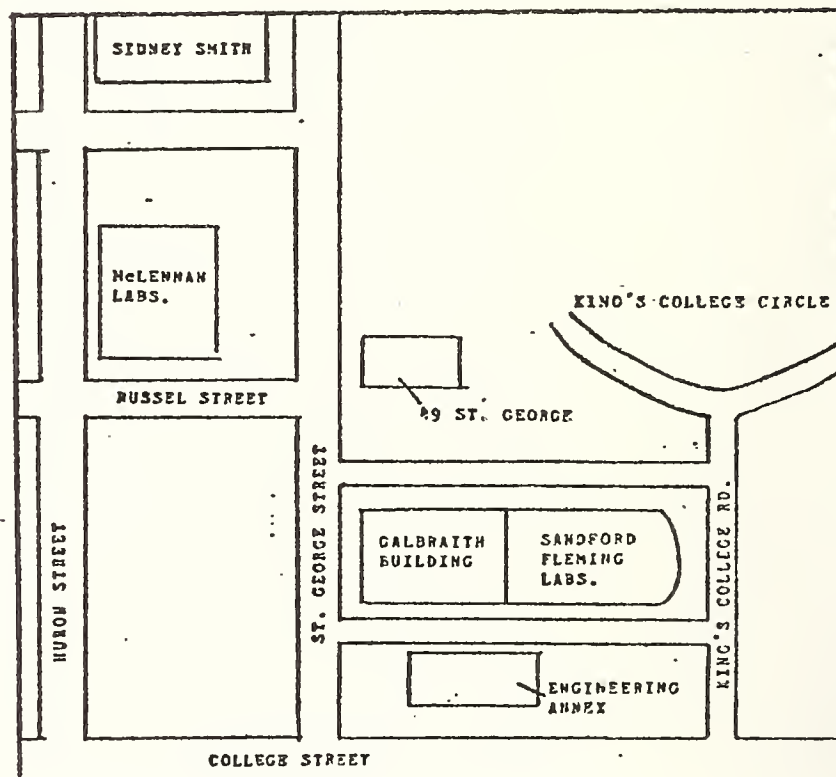
EA = Engineering Annex
 SF = Sandford Fleming
 SG = 49 St. George
 NP = McLennan Physical (New Physics)
 SS = Sydney Smith

JOB AND SYSTEM STATUS QUERIES

SYSTEM/370,TSO	7373
ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

SERVICES

	<u>DIAL-UP</u>	<u>ADVICE</u>
APL - 2741	7200	6710
APL(ASCII)	7200	6710
APL SV - 2741	7239	6710
APL SV - TTY	7447	6710
ATS	7100	7107
TSO - 2741	7303	8599
TSO - TTY (10 cps)	7390	8599
TSO - TTY (30 cps)	7386	8599
DATATALK	6710	6710
WYLBUR	7235(EBCDIC)	8599
	3950(ASCII)	
	CENTREX	
	3954(ASCII)	
	NON CENTREX	



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